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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,059	12/02/2003	Paul-Andre Lavoie	1061958	2938

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OSLER, HOSKIN & HARCOURT, LLP (AVESTOR)
1000 DE LA GAUCHETIERE STREET WEST
SUITE 2100
MONTREAL, QC H3B-4W5
CANADA

EXAMINER

WOLLSCHLAGER, JEFFREY MICHAEL

ART UNIT	PAPER NUMBER
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1732

MAIL DATE	DELIVERY MODE
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07/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,059

Applicant(s)

LAVOIE ET AL.

Examiner

Jeff Wollschlager

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

It is noted for the record that Examiner Wollschlager has assumed responsibility for this application from Examiner Eashoo.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 20, 2007 has been entered.

Response to Amendment

Original claims 1-15 are pending and under examination. Claim 16 has been canceled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Winterberg et al. (WO 01/82403).

Citations to Winterberg et al. are provided from the equivalent US patent document, US Patent Application Publication 2004/0029008.

Regarding claims 1 and 2, Winterberg et al. teach a method of producing a rechargeable lithium-polymer battery comprising mixing a polymer with active material and a conductive additive (4); lithium salt (3) and a polymer into an input zone/ first mixing chamber (19); mixing a polymer with lithium salt into an input zone/second mixing chamber (18) to form an electrolyte slurry; extruding the electrode slurry and the electrolyte slurry intrinsically through flow channels and die openings/extruder nozzle (5) to produce a multilayered article (Figure 2) onto a moving current collector sheet (8 and 9) wherein the electrolyte sheet is extruded directly onto the electrode sheet (Abstract; Figure 1; paragraph [0014-0034; 0043; 0047-0048]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-5, 7, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winterberg et al. WO 01/82403), as applied to claims 1 and 2 above, in view Barton et al. (US 6,503,432) and Kim et al. (US 6,403,266)

Art Unit: 1732

As to claims 3-5, 7, 10 and 11, Winterberg et al. teach the method of claim 1 as set forth above. Winterberg et al. do not expressly teach forming the multi-layered structures as claimed. However, Barton et al. teach a method of producing extruded multi-layered lithium ion batteries (Abstract; Figure 1; col. 6, lines 28-52; col. 12, lines 16-col. 13, lines 52) and Kim et al. teach applying additional layers to form a multi-layered lithium battery structure (Figure 3).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method disclosed by Winterberg et al. and to have produced a multi-layered lithium battery as suggested by Barton et al. and Kim et al. for the purpose of increasing the capacity of the battery as is routinely practiced in the art.

Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winterberg et al. WO 01/82403), in view Barton et al. (US 6,503,432) and Kim et al. (US 6,403,266) as applied to claims 3-5, 7, 10 and 11 above, and further in view of Fukumura et al. (US 5,674,556).

As to claim 6, 8 and 9, the combination teaches the method as set forth above. Winterberg et al. do not teach the die comprises a central channel adapted to guide the current collector between the die openings. However, Fukumura et al. teach that it is known in the art to guide the current collector between the die openings (Figure 7A and 7B).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have modified the method disclosed by Winterberg et al. and to have extruded the current collector between the die openings as suggested by Fukumura et al. since Fukumura et al. suggest that such a method is an equivalent alternative method of forming a multi-layered extruded battery structure.

Art Unit: 1732

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winterberg et al. WO 01/82403), as applied to claims 1 and 2 above, in view of applicant's admitted prior art (see US 2004/0159964 for text of the instant disclosure).

As to claims 12-15, Winterberg et al. teach the method of claim 1 as set forth above. Winterberg et al. do not teach controlling the layer thicknesses using various measuring devices (e.g. optical, ultrasonic, etc.). However, applicant's admission teaches that controlling the layer thicknesses using various measuring devices is known to those skilled in the art to ensure strict tolerances (paragraph [0028]).

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have used any of the various measuring devices as taught by applicant's admission in the process of Winterberg et al. for the purposes of achieving the desired layer thicknesses within a specific tolerance.

Response to Arguments

Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

July 10, 2007

/Christina Johnson/
Christina Johnson
Supervisory Patent Examiner
AU 1732